



*Take it to DAMAX...The most powerful cellphone antennas in the world*

Via Electronic Filing

October 21, 2002

William F. Caton, Acting Secretary  
Federal Communications Commission  
Washington, DC 20554

RE: *Ex Parte* Presentation; WT Docket No. 01-309; RM-7657; Section 68.4(a) of the  
Commission's Rules Governing Hearing Aid Compatible Telephones

Dear Mr. Caton:

DAMAX International ("DAMAX") made an oral presentation, including a demonstration of its antenna technology accompanied by independent laboratory and carrier antenna test data to the Wireless Telecommunications Bureau represented by Patrick Forster, Senior Engineer; Mindy S. Littell, Attorney; and Joel Taubenblatt, Legal Advisor to the Bureau Chief. In addition, the FCC's Disabilities Rights Office was represented by Tom Chandler and Janet Sievert, and the Office of Engineering and Technology by Jerry Stanshine. DAMAX was represented by Greg Johnson, its CTO, and N.N. (Bill) Luxon, its CEO.

The technical information DAMAX provided consisted of presentation of independent laboratory and carrier network field test data of DAMAX antenna performance, and on-air audio tests that demonstrated the reduction in hearing aid noise caused by digital cellular telephones made possible by the new DAMAX cellphone antenna technology. The independent laboratory data showed antenna patterns, SAR data, hearing aid noise level data, and field performance of both DAMAX new PCS and dual-band cellphone antennas.

Two cellphones, a Sony-Ericsson GSM phone operating on the Cingular (PCS) network, and a Nokia 5165 TDMA phone operating on the Cellular One (tri-mode) network were used. Each phone was equipped with an external DAMAX antenna, a PCS band unit for the GSM phone and a dual-band for the TDMA phone. Both antennas employed the new DAMAX technology which Intertek Testing Services, (FCC accredited as a Telecommunications Certification Body) showed reduced SAR from 84.4% to 95.6% (the primary cause of noise in hearing aids) below the 1.6 watts per kilogram maximum permitted by the FCC.

Three in-ear hearing aids (furnished by Starkey Labs in Eden Prairie, Minnesota) were used in the demonstration. One hearing aid was a linear, non-DSP based unit, the second was a DSP (Axent) aid, and the third a digital aid capable of switching between omni and directional. A miniature microphone fed to an amplified speaker processed the audio output from the hearing aid under test so that everyone present in the room could hear the results of each test.

For demonstration purposes the two cellphones were placed on-call to each other, then each phone was held directly next to the hearing aid under test. The first position of the handset to be tested was with the back (away from the user) side of the phone positioned near to the hearing aid, then with the front (next to the head) speaker side of the phone positioned next to the

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aid. The results, for both cellphones, and all three hearing aids were the same: a) very high audio noise from the hearing aid output when the phone back faced the aid; and b) elimination of the noise with the speaker side of the phone held next to the aid.

The test data presented also showed the DAMAX antenna technology increased antenna gain up to 3 dBi (within the limits specified in FCC regulations), which data also showed, would substantially increase the range of the phones, as compared to existing cellphone antennas when users wished to make calls in service areas where carrier base station coverage was marginal. The test data also revealed the lower power loss to the head allowed the handsets tested to operate at lower commanded power steps, which reduced the amount of power drawn from their batteries, thus increasing the air time available for users.

DAMAX representatives also stated that they were beginning efforts to try and convince carriers to carry hearing aid compatible digital cellphones at every location where they activate phones, so that people can test them to see if they perform noise-free with their aids, and thus are able to use the carrier's service.

Attached to this electronic filing is the test data information provided at the meeting, and an Executive Summary of the DAMAX business plan.

Please contact me if you have any questions about this meeting or the attachment.

Cordially,

N.N. (Bill) Luxon

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